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Picturing the future-conditional: montage and the global geographies of climate change

Martin Mahony

A growing body of work has explored the effects of visual imagery on shifting forms of environmental consciousness and politics. Circulating images of, for example, the ‘whole Earth’ have been ascribed agency in the emergence of new forms of planetary awareness and political globalism. This essay identifies a new form of global environmental image, in the shape of photographic montage depictions of future places transformed by the effects of climate change. Montage enables artists and designers to import the spatial formations of distant places into more familiar locations, in the process producing novel renderings of the interconnections of global environmental change. The future-conditional – ‘if x, then y’ – has become a key register of scientific and artistic engagement with climate change, and practices of visual montage have offered means of reconciling the transformations of space and time in the imagination of putative futures. The essay situates such images within a longer lineage of depictions of the tropical and the ruined, and focuses on contemporary montage depictions of climate-change-induced migration. It argues that many of these ‘global montages’ problematically reinforce extant notions of geographical otherness. Yet montage, as a technique, also renders visible the choices, cuts, juxtapositions and arguments which lie behind any representation, thus offering the seed of a more reflexive mode of future-conditional image-making.

Key words climate change; global environmental images; geographical imagination; photography; montage; migration; reflexivity

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Introduction

Global environmental images, it seems, have played an important role in the formation of a newly global environmental consciousness (Cosgrove 2001; Jasanoff 2001; Heise 2008; Grevsmühl 2014). Stewart Brand, a ‘Northern California hippie’ (Russill 2013, 277), campaigned in the 1970s for the public release of images he knew were in NASA’s possession – ‘whole Earth’ imagery which, Brand believed, would radically alter environmental and geopolitical consciousness. The ‘Blue Marble’ soon followed, along with a torrent of new images of Earth-from-space, circulating widely and becoming icons of new environmentalisms (Poole 2008). This conjuncture of Cold War military technologies and alternative politics points towards the complex, sometimes paradoxical alliance of technoscience and an environmental movement which sees modern science and technology as one of the chief drivers of

environmental devastation, but also as the most reliable means of understanding and perhaps ameliorating its underlying processes (Beck 2009). The global environmental image has become totemic both of the ability of technoscience to closely monitor and manage on heretofore unprecedented spatial scales (Gurevitch 2014; Mirzoeff 2014; Höhler 2015), and of a new ‘cosmopolitan’ political ontology that speaks of global citizenship, radical interconnection and collective responsibility (Beck 2009; Held 2013).

As a range of recent publications have shown, there is value in critically engaging with the why and how of global environmental images, examining their changing meanings and rhetorical form, and situating them in their respective cultural and political contexts (e.g. Doyle 2011; Carruth and Marzec 2014; Grevsmühl 2014; Schneider and Nocke 2014; Cook and Balayannis 2015). But a persistent theme of scholarship on the politics of global environmental change has been the

complex relationship between the 'global' and the 'local', and the ways in which 'global' problems come to matter in diverse localities through processes which are at once cognitive, cultural and ideological (e.g. Jasanoff and Martello 2004). Scholars of the cultural politics of climate change have argued that global images are too distant, remote and alienating to enable effective local engagement with the problem (O'Neill and Hulme 2009; see also Jasanoff 2010; Hulme 2010); despite the robustness of scientific consensus, and the reliability of global models and measurements, climate change remains essentially 'invisible' (cf. Morris and Saylor 2014). If only, the argument goes, carbon emissions and global temperature were visible to the 'naked eye', like the smog of Victorian London, political action would surely follow (e.g. Giddens 2013)¹. Various artistic and rhetorical strategies have therefore been devised to help 're-localise' and visualise climate change (Doyle 2011; Sheppard 2012).

This essay identifies a new kind of global environmental image which complicates the received dichotomy between the abstract, cosmopolitan global and the meaningful, particular local. In recent years photomontage depictions of places ravaged by the effects of

climate change have become an increasingly prominent part of the visual discourse of global environmental change (e.g. Figure 1). This is a genre of future-conditional image which seeks to represent the possible effects of global climate change in local settings, and in that sense is perhaps no different from other efforts to visually localise the global (e.g. O'Neill and Hulme 2009). But I want to contend that these images are distinct in that they re-localise global change through the visual juxtaposition of extant, diverse places, reaching across the globe for climatic and environmental conditions in other places which can serve as analogues for climatic futures in the target location. In this sense, these are global environmental images both because they are representations of the local effects of global processes, and because their visual lexicon consists of a globe-spanning articulation of climatic and geographic difference, where global space is transformed into local futurity.

In the next section, I briefly discuss the links between photographic realism, rhetoric and the visual discourses of climate change, before introducing the history of photomontage. Dada, Constructivist and Surrealist movements turned photography's realism against itself



Figure 1 *Honor Oak – Suburban Bucolia*

Source: Flooded London exhibition, Medcalf Gallery, London, 2008.

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in the construction of new views of a common world, variously utilising what Rancière (2009a) defines as dialectical and symbolic forms of montage, along with diverse strategies of representing the act of juxtaposition itself. Informed by this history, the discussion then focuses on a range of photomontage depictions of climate change produced by artists, designers and advertising agencies, exploring their place within deep-rooted visual discourses of the tropical and the ruined, and examining how photomontage has been used to speculate, in a future-conditional mode, on the consequences of 'climate change-induced migration'². The essay concludes by arguing that while photomontage is an inherently subversive medium, current applications of the technique to climate change are problematic in their reification of geographic otherness. However, photomontage contains within it the potential of a more reflexive form of rhetoric, with the choices of the artist and designer foregrounded as a feature of visual representation itself, and as such may find new, progressive uses at the interfaces between science and art, present and future, local and global.

Photography, climate and montage

Since its emergence in 19th century Europe, photography has proceeded under the momentum of a polemical realism. As a mechanical technique for capturing the electromagnetic traces of an object, photography offered a radical departure from the skilled, interpretive eye and hand of the painter, and became a central technique of encountering the real as the sphere of Western knowledge and experience expanded with the force of European colonialism (Schwartz and Ryan 2003). Fracturing newly encountered chunks of reality into materially transportable impressions of people and places, photography drew together previously disparate elements of the world into networks of encounter, exchange and representation (Latour 1990), and thus functioned as a powerful element of the development of a particular 'geographical imagination' (Harvey 1990) – the suite of ideas, knowledge practices and images through which 'the condition of both the known world and the horizons of possible worlds' are rendered in spatial terms (Daniels 2011, 183).

As a practice, photography has been an important instrument of constructing knowledge and understanding of the world, of identity and difference, and of the politics of collective world-making (Kress and Leeuwen 1996; cf. Foucault 2002, 61; Jenkins 2007). For Booth and Davisson (2008), images of disaster – such as extreme weather events – should not be considered to be simply rhetorical – a call to arms, the identification of a problem and an argument for its melioration. Rather, images also participate in the construction of the situation which demands rhetoric. They *create* or

construct the problem at hand in particular ways, thus suggesting particular modes of response. Sontag (2003) mobilises this argument in her critique of how photographic representation prioritises certain problems over others, and creates silences and blind spots as attention is directed towards the novel at the expense of the banal, silent violence and catastrophes endured by many every day (cf. Hulme *et al.* 2009; O'Leary 2015). But Sontag (2003) also reminds us that despite these powerful framings, the meanings attached to photographs are not semiotically static. They shift as cultural climates and spatial contexts change. Meaning overflows the bounds of semiotic structures and of particular sites of interpretation; the relation of sign to signified mutates as links are forged between old representations and new normative articulations.

Photography has been prominently employed as a means of generating concern about climate change. As rhetoric, photographs have been used to call for the melioration of social and ecological vulnerability to the effects of rising temperatures and shifting weather patterns. Shrinking glaciers, flooded settlements and stranded polar bears have become dominant visual tropes, along with the aforementioned 'whole Earth' images of 1970s space programmes (Doyle 2007; O'Neill and Nicholson-Cole 2009; Manzo 2010; Doyle 2011; Nerlich and Jaspal 2013; Jackson 2015). However, most commentators agree that such visual rhetoric has constructed the problem in unhelpful ways, with little apparent effectiveness in promoting widespread affective engagement. Questions of distance (such as between European viewers and Arctic polar bears) and scale (between situated viewers and global imagery) figure large in analyses of photographic disengagement with climate change (O'Neill and Hulme 2009; Doyle 2011). This interplay of distance and scale is a scopic phenomenon which has particularly concerned proponents of photomontage techniques, both historically and in more recent depictions of climate change.

Photomontage

Montage, 'the aesthetic practice of combination, repetition and overlap' (Valcke 2009, 9), or 'the juxtaposition of symbolically charged images for critical affect' (Doel and Clarke 2007, 890), came to prominence in post-World War I avant-garde movements in Germany and Russia. Photomontage – that is, montage incorporating images or segments of images from one or more photographic source – can be traced to late nineteenth century 'combination printing' whereby two or more negatives would be combined in the printing process, usually to compensate for errors in exposure earlier in the process. Weather and climate were early objects of manipulation – Henry Peach Robinson, in images such as *Nor'Easter* and *Fading Away* (Figure 2), achieved 'impressive meteorological effects' by inserting cloudy



Figure 2 *Fading Away* by H.P. Robinson, 1888. Robinson combined five different negatives to create the image, particularly to enhance the view of the sky from the window

Source: Reproduced with kind permission of the Science & Society Picture Library and the Royal Photographic Society, National Media Museum.

skies into scenes where they might otherwise be washed out – but such trickery was often looked down upon by an emerging photographic establishment concerned with protecting photography's polemical realism (Ades 1986, 9).

However, in the period immediately following World War I photomontage took on a more radical and avowedly subversive role as a form of 'oppositional modernism' (Vasudevan 2015, 141). In Germany, artists associated with the Dada movement such as John Heartfield, Hannah Höch and Raoul Housmann used montage as a means to engage in critique of the emergent Weimar political system. The Dadaists saw in photography's new powers of signification a potential, to be realised through montage techniques, to bring disparate aspects of the world into new relations and thus, by turning 'an insensitive photographic realism against itself', and exploiting the semiotic instability identified by Sontag, to highlight and critique the ironies, contradictions and promises of a new social order in which photography itself was seen as the height of rational objectivity (Cuevas-Wolf 2009, 348). Whilst straining against the romanticism of late impressionism, montage arguably represented photography's 'self-correction' against the limitations of the still young artform's dependence on empirical realities (Adorno 2004, 202). The Dadaists paired a revulsion against the industrial war machine with a fascination with 'the speed, chaos and violence of an Americanised world', channelling aspects of Futurism into a concern with

the revolutionary potential of new technologies (Valcke 2009, 22). Violent, even comic juxtapositions, warped spatial scales and rejection of the 'illusion' of perspectival space constituted a new visual lexicon which was employed enthusiastically among the Berlin Dadaists in their responses to the Weimar Republic, new forms of urban and industrial life and, later, the rise of Fascism.

John Heartfield became the most famous Berlin *monteur*, giving visual expression to a wider sense of impending catastrophe with images such as that on the cover of Upton Sinclair's *After the Flood*, which tells of a modern city ravaged by a flood of biblical proportions (Figure 3).

By the late 1920s Heartfield's attention was focused on more immediate political events, and his famous responses to the rise of the National Socialists, such as *The Sleeping Reichstag* (1929) and *A Pan-German* (1933), were more visually literal than many German photomontages of the 1920s, with the political bite of the images now focused on recognisable people, events or places (see e.g. Evans and Gohl 1986).

From dialectical to symbolic montage

Rancière (2009a) identifies two dominant forms of montage – the dialectical and the symbolic. Dialectical montage aims, through 'assimilating heterogeneous elements and combining incompatible things', at 'revealing one world behind another'. Through clashes and contradictions, and 'presenting the strangeness of the



Figure 3 Upton Sinclair's *Nach der Sintflut* (*After the Flood*) with cover image by John Heartfield
 Source: Published by Malik Verlag, 1925. Reproduced from <http://photobibliothek.ch/seite010a1.html>

familiar', a hidden order is order exposed (Rancière 2009a, 56–7). By contrast, symbolic montage directs the assembly of heterogeneous elements towards establishing 'a familiarity, an occasional analogy, attesting to a more fundamental relationship of co-belonging, a shared world where heterogeneous elements are caught up in the same essential fabric' (Rancière 2009a, 57).

We can see dialectical montage at work in the oppositional modernism of Dada, as well as in Russian Constructivism, a movement which sought a new role for the visual arts in the building of a new, revolutionary society. Like the Dadaists, the Constructivists drew in part on early Futurist imaginaries of modernisation and

technological progress, with artists such as Sergei Eisenstein, Dziga Vertov, Gustav Klutsis, El Lissitzky and Alexander Rodchenko working across film, theatre, literature, architecture and visual art to develop a pro-revolutionary aesthetics of communist modernity. Although much of the thinking behind this turn to montage was shared with their German colleagues, the Russian artists were operating in a very different political context:

The photograph fixes a static moment, an isolated shot. Photomontage visualizes the dialectical unfolding of a theme of a given subject ... [it]

solves the problem of so-called pictoriality by presenting the manifold and interrelated character of reality, by revealing the concrete manifestations of the constructive socialist project precisely through the combination of elements ... [Photomontage's] fundamental aim is to foreground the given phenomena in a dialectical manner.

Gustav Klutskis (quoted in Valcke 2009, 18–19)

Constructivist artists turned to montage not to predict impending disaster, but to visualise the project of building a new, common world. The practice of dialectical juxtaposition offered a means of imagining new futures and celebrating the dialectical unfolding of history, the cutting-and-pasting of montage echoing the contemporary upheavals, movements and re-alignments of early Soviet society (see for example Klutskis' *The Electrification of the Whole Country*, 1920 or *The Old World and the World Being Built Anew*, 1920, the latter in Ades 1986, 68). The decentering of the privileged painterly observer, master of perspectival space (Panofsky 1991), in favour of spatial flattening and radical shifts in scale was a jointly aesthetic and political radicalism, and Constructivist artists and their techniques quickly moved into the fields of commercial publicity, the popular press and agitprop. Constructivism was to

be an art in service of society, but this was a society changing fast and, by the late 1920s, Constructivism would find itself condemned as formalism, while the new socialist realism was adopted as the official aesthetics of the Soviet state.

While dialectical montage was a key strategy of the Dada and Constructivist montage artists, symbolic montage played a key role in the Surrealist employment of photomontage techniques in 1920s Paris, with artists such as André Breton enamoured with 'the fascinating paradox of being able to distort reality with the medium which was its truest mirror' (Ades 1986, 107). The Dadaist Max Ernst can be seen as a key link between Dada and Surrealism, and between dialectical and symbolic forms of montage. Rather than straight political commentary, Ernst's work aimed at the distortion of pictorial reality through the fantastical transformation of bodies, landscapes and objects (e.g. *The Murderous Aeroplane*, 1920). Writing of Ernst's montages in 1921, Breton argued:

It is the marvellous faculty of attaining two widely separate realities without departing from the realm of our experience, of bringing them together and drawing a spark from their contact; of gathering within reach of our senses abstract

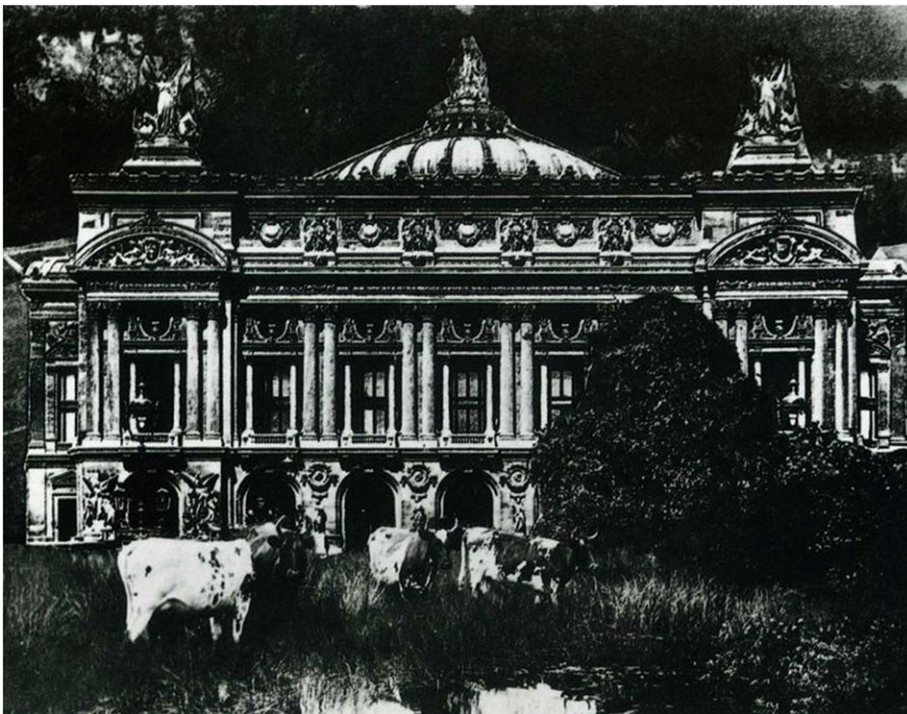


Figure 4 *Opéra de Paris* by René Magritte

Source: *La Révolution Surréaliste* no. 12, 1929, p. 46.

Available at <http://inventin.lautre.net/livres/La-revolution-surrealiste-12.pdf>

figures endowed with the same intensity, the same relief as other figures.

Quoted in Ades (1986, 115)

Breton reads from Ernst's work some of the key features of montage in a symbolic mode which would come to help define Surrealism; heterogeneity with within the 'same essential fabric', co-belonging within the realm of experience (Rancière 2009a, 57). While the dialectical project of exposing a hidden order or celebrating the accelerated unfolding of history made the process of pictorial manipulation obvious, Surrealist montage began to obscure its own manipulations. Surrealism's wider purpose of deepening a sense of the real and of exploring new kinds of mental consciousness meant that junctures and juxtapositions tended to be included 'within the 'real' scene', a feature of a symbolic field tending towards analogy (Ades 1986, 136). Magritte's *Opéra de Paris* (Figure 4) is a case in point, offering an apparent continuity of space as the Parisian landmark rises from a field of cows. Like earlier combination printing, Magritte enhances a recognisable scene, the manipulation obvious (if not the underlying process), but he does not depart from the real in the sense of fracturing perspectival space. Instead, Magritte achieves a comic rendering of urban/rural integration

which speaks to his contemporaries' concerns about urban alienation from nature and the bourgeois grandiosity of inherited urban forms. In images such as these, 'the object stubbornly keeps its original nature ... in spite of the metamorphoses effected around it and demanded of it, and the shock of the contrast is much greater' (Ades 1986, 116).

Rancière's identification of dialectical and symbolic forms of montage helps to crystallise how the work of the *monteur* creates different kinds of spatial and temporal rupture, which are freighted with different political claims about sameness and difference, (dis)continuity, and the (non)linearity of societal transformations. Theodor Adorno was altogether more sceptical about the artistic and political power of montage, seeing it as an artistic capitulation 'to what stands heterogeneously opposed to it' through the admission into itself of 'literal, illusionless ruins of empirical reality ... for purposes of aesthetic effect' (Adorno 2004, 202–3). Adorno was writing in the 1960s, arguably long after photomontage had lost much of its oppositional-modernist punch, and 'the power of juxtaposition to shock people into novel and more reflective awareness' has, for Dillon (2004), long since 'faded into the daylight of TV and advertising uses' of montage techniques. Artists like Martha Rosler nonetheless bucked the



Figure 5 From the series 'Global Warming Ready'

Source: Diesel (2007). Reproduced from <http://theinspirationroom.com/daily/2007/diesel-global-warming-ready/>

postwar trend of depoliticised montage, with dialectical strategies of unveiling the hidden contradictions of episodes like the Vietnam War (Ranci re 2009a 2009b). But the symbolic potential of photomontage has always made the technique popular with advertisers and publicists, including those who were quick to seize on the rhetorical potential of photomontage in early Soviet Russia. Montage offers a means of constructing fantastical, utopian worlds, which has long appealed to the advertisers' aim of constructing and directing desire.

In the next section, I begin the analysis of a range of more recent climate change montages, using the preceding historical and analytical review to inform my interpretation of the aesthetic and political work done by a variety of compositional and thematic approaches, across the fields of advertising, graphic design and the visual arts.

Photomontage and climate change

The inundated city

The embedding of climate change into cultural engagements with the future has coincided with, and been driven by, huge expansions of computer processing power, enabling both the computation and prediction of global climate change and the widespread production of digitally manipulated images of climate-changed futures (cf. Dillon 2004; Edwards 2010). Such images typically combine recognisable landmarks with either familiar symbols of distant climates (such as palm trees) or with signs of environmental catastrophe (such as floodwaters). An example is the 2007 advertising campaign by clothing manufacturer Diesel, entitled 'Global Warming Ready', which featured a suite of images of models making the most of environments radically transformed by climate change. They apply sun lotion on a tropical beach at Mount Rushmore, sunbathe on the roof of a Manhattan high-rise as the sea laps at the tops of New York's iconic skyscrapers, and frolic, linen-clad, around a tropical garden at the base of the Eiffel Tower (Figure 5).

Diesel's marketing team appealed to the surreal, subversive potential of photomontage to explain their choices: 'The shocking effects of Global Warming are not immediately noticeable but are subtly revealed through details in the ads depicting ordinary scenes in a surreal, post-Global Warming world' (quoted in MacLeod 2007). An accompanying website combined apparently earnest efforts to educate and inform with tongue-in-cheek references to the resilience of glamorous lifestyles in a globally warmed world – a flippancy which attracted some justified criticism (MacLeod 2007). Yet here digital manipulation and photomontage were employed to subvert not only environmentalist discourses of catastrophe, but also an emerging visual field through which urban futures under climate change

were being portrayed. In 1986 the German news weekly *Der Spiegel* published an image which gained locally iconic status as a representation of climate change (Figure 6). Deliberately playing on a historical lineage of images of war-ravaged cities and appealing to a risk-averse civic epistemology (Jasanoff 2005 2011; see also Gregory 2011), the image of K ln Cathedral rising out of several feet of Rhine floodwater became emblematic of a general embracing of the idea of catastrophic climate change. The image also connected K ln Cathedral's status as a significant national icon in pre-unification Germany with a longer lineage of Rhineland floods and 'Father Rhine' as actors in local and national mythologies (Grittmann 2014). Climate change became an object of political debate (rather than of scientific contestation) in Germany two years before the 'hot summer' of 1988 which propelled it up the agenda in the US and Margaret Thatcher's concurrent attempts to make climate change an object of collective concern in the UK (Agar 2015). A 2003 exhibition at the Cit  des Sciences in Paris entitled *CLIMAX* likewise played upon urban imaginaries of inundation and disaster with portrayals of an inundated Paris in the year 2100. The name 'Climax' deliberately challenged progressivist models of history by positing, like the Dada *monteurs*, a more nonlinear *telos* than that which has conventionally dominated modernist imaginations.

Urban inundations have not always been used to signify catastrophe, as with Heartfield (Figure 2), *Der Spiegel* (Figure 6) and *CLIMAX*. In 1899 *Harmsworth Magazine* published a series of images on the theme of *If London Were Like Venice*, with Gondolas cruising along Whitehall, up Haymarket and around central London's famous squares. Such images prefigured the Surrealist use of photomontage to juxtapose the 'marvellous and the commonplace' as well as the employment of the technique in comic postcards and publications where the stubborn nature of the familiar is transformed through metamorphoses of its immediate environment (Ades 1986, 106). But the inundated city has a long lineage as an icon of civilisational collapse. Although cities have only recently come to account for the majority of the world's human population, anticipations of disaster have often been situated in urban settings (Davis 1999; Williams 2011). The city is popularly taken as the emblem of Western modernity and, in particularly teleological imaginations, as the future instantiated; the embodiment and symbol of humanity's turn away from its rural, agricultural past towards its networked, cosmopolitan, high capitalist future – hence the fascination of Futurist, Constructivist and Dada artists with the urban form. As Boia (2005) notes, such a *telos* associates quickly with anxieties about the pace and consequences of social and



Figure 6 Front cover of *Der Spiegel* 33/1986, 'Die Klima-Katastrophe'
 Source: Reproduced with kind permission.

technological change. Progressive teleologies have been commonly rebutted by a cyclical conception of history which sees no rise without a fall. Cyclical understandings of time and of the inevitability of apocalypse have roots in a variety of cultural contexts, but Boia suggests that the rise of industrial modernity gave a particular valence to fears about the 'end of times'. As the pace of history accelerated, so fears about societal collapse gained currency and cities were imagined as the epitome of modernity's inherent vulnerabilities. Such fears evolved alongside – or were mediated by – fears about the environmental repercussions of such unprecedented changes in the human condition, with climate often functioning as an explanatory variable long before concerns about greenhouse gas emissions (e.g. Fressoz 2007; Locher and Fressoz 2013). In the nineteenth

century technological utopianism jostled with millenarian dystopianism, the latter often animated by fears of violent tectonic shifts and catastrophic meteorite strikes. In 1905, Camille Flammarion published an article which described a marine invasion of France, illustrated with Henri Lanos' hand-drawn image of a submerged Paris. Human figures float amid submerged Parisian landmarks, the inundation only recent; a street scene still recognisable.

Ruined cities

The ruin, likewise, stands in the history of art as a malleable symbol of civilisational triumph, collapse and memory. While for Renaissance artists the ruin was a legible remnant of civilisations past, by the eighteenth century the ruin came to stand for either natural disaster or human catastrophe, made meaningful by

juxtaposed human figures either bearing witness or suffering their own martyrdom. In the nineteenth century the dialectic of ruin and nature turned to the ruin of nature itself, with John Ruskin's writings on environmental degradation informing a new mourning for a lost, natural harmony, and Richard Jeffries' *After London* (1885) describing a 'regained Eden' (Miles 2014, 71). Ruins were naturalised, recognised as unique spaces of a precarious natural balance all their own, Richard Deacon's *Flora of the Colosseum* of 1855 an early exercise in recombinant ecology (see also Simmel 1958).

Imperial hubris also began to inform concerted consideration of Britain's own future ruins. Sir John Soane, architect of the Bank of England, revelled in the image of his own building's ruined future, and Lord Macaulay wrote of a future New Zealand tourist contemplating a ruined London from the banks of the Thames (Dillon 2006). An imperial gaze directed towards the ruins of other, lost or disappearing cultures also informed colonial 'salvage' missions (Stoler 2008, 198), and the 'pleasure of ruins' (Macaulay 1984) is still deeply felt in a contemporary aesthetics of melancholy and a nostalgia



Figure 7 *St Paul's – A Late Afternoon Plunge*

Source: Flooded London exhibition, Medcalf Gallery, London, 2008.

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for particular forms of metropolitan and colonial modernity (Dillon 2014; see also Hell and Schönle 2010). Imaginations of environmental catastrophe have given new purchase to the interplay of destruction, redemption, social levelling and persistence, and to a dialectic of nature and ruined or ruinous culture (Miles 2014; Jackson 2015).

This dialectic lends itself to photomontage. Pablo Geneves' *Precipitados* depicts a vengeful return of the natural in a series of images of famous sites of high European culture in the process of inundation by flood waters. Echoing the apocalyptic imagery of the 2004 blockbuster *The Day After Tomorrow*, the future legibility of European civilisation is under threat, Geneves' photomontages depicting a 'collision of timeless cultural grandeur with overwhelming natural destruction' (Jones 2015). This is montage in its dialectical form, combining the seemingly incompatible – a violent nature and cultural serenity – to foreground and critique the otherwise invisible relationships between the two (Rancière 2009a). By contrast, film and media studio Squint/Opera's images of lonesome figures subsequently making the most of a flooded, ruined London, a 'tranquil utopia' (Fairs 2011), recall J.G. Ballard's *The Drowned World*, where the world 'is beautiful, its landscapes swathed in misty warm pink and orange light' (Figures 1 and 7). Refusing the 'overdetermined orders represented by the drowned city', the survivors can seek their own redemption 'in taking charge of their own fate' (Miles 2014, 80).³ This is montage in its symbolic form, positing a new 'relationship of co-belonging, a shared world' (Rancière 2009a, 57).

Postcards from the future

In 2010 the Museum of London hosted a high-profile exhibition entitled *Postcards from the Future*, a collection of images by graphic artists Robert Graves and Didier Madoc-Jones depicting a future London under climate change⁴. In a darkened space, huge, backlit photomontages hovered moodily over visitors' heads, offering a London ravaged by water, ice, heat, new industries, and more people. The ravaging was not exactly apocalyptic: buildings were not overrun with tropical vegetation as in Ballard's dystopia, but stood proud and intact in the water of the swollen Thames or amid the sand of a desertified Horse Guards Parade. The scenes appealed to the uncanny, the 'propensity of the familiar to become defamiliarized and derealized' (Vasudevan 2015, 152), exploiting what John Berger described as montage's 'peculiar advantage': 'the fact that everything which has been cut out keeps its familiar photographic appearance. We are still looking first at things and only afterwards at symbols' (Berger 2013, 25). The overall impression was of a stoic city – resilient, adaptable, like the city narrated as a 'survivor' of the great fire of 1666 and of the bombs of World War II.

Postcards from the Future presents a range of possible urban-climatic scenarios, rather than an internally coherent narrative of a single imagined future. Alongside scenes of elemental inundation are scenes of ecological modernisation – of responses to climate change which mitigate and adapt to its effects through the deployment of sophisticated technologies while not fundamentally challenging the social relations of capitalist production. Flag poles on the Mall are replaced by Union Jack-bearing wind turbines. Kew Gardens, a centre of botanical and ecological research, now hosts a nuclear power station, its domed form towering over suburban southwest London. Water turbines float next to the Thames Barrier, offering a visual marriage of mitigation and adaptation strategies.

Another group of images rehearses a familiar set of themes of urban transformation. We are offered a bird's-eye view of Tower Bridge surrounded by ice skaters, their long shadows emphasising their diminutive stature next to the grandeur of one of London's most iconic structures. The contrasting of tiny human figures with huge expanses of ice and water has become a common feature of climate change imagery, with connotations of human fragility in the face of colossal natural forces (Nerlich and Jaspal 2013), a culmination or parallel perhaps of the progressive naturalisation and romanticisation of ruins traceable from Renaissance to Victorian art, where human figures become increasingly marginal and diminutive as the dialectic of nature and culture skews towards the former (Dillon 2006). In *Camel Guards Parade* military horses have been replaced with camels, in an adaptation to London's newly warmed climate. Unlike the snowy vista of Tower Bridge, here a low-level perspective is offered of a hazy, early evening sky, the sun low, sub-tropical heat bearing down.

One image, *London as Venice*, recapitulates the common trope of flooded urban environments. The caption reads: 'Like a modern day Canaletto, this disturbing yet strangely peaceful aerial view of a flooded Thames was inspired by shots of New Orleans submerged under the floodwaters of Hurricane Katrina' (Graves and Madoc-Jones 2010). From a vantage point above Westminster, the scene stretches away from the Houses of Parliament towards the City of London. The Thames has risen almost to the level of its bridges, the roads and parks of Westminster and the South Bank are inundated with water. Unlike Geneves' elemental violence, the picture is serene – a low sun casts long shadows, and the pink-hued sky shows few clouds above the placid floodwaters.

The caption accompanying the *London as Venice* postcard invites comparison with Canaletto's contributions to the *vedute* (or 'view') tradition of landscape painting. His images of Venice and London functioned as aides to planning, architecture and tourism, 'static,

perspectival compositions that represent physical relations precisely', delineating buildings and allowing comparison with the spaces that surround them (Tavernor 2007, 162). Canaletto used a *camera obscura* to attain such precision – an early indication of the instrumental potential of photography and a prefiguration of the early twentieth century use of photogrammetry in efforts to rebuild ruined buildings. Canaletto's works have been used by conservative thinkers to argue for the preservation of London's historic skyline, in the context of planning regulations which are unique in their nervous attachment to history and to the visual, with this image of a new Flood striking at the heart of London's visual identity. In the new image, this tradition of precision *vedute* is drawn upon to depict a river raised by 7.2m, overwhelming any attempts at preservation. Landscape thus becomes a means of inducing concern for what might be lost to forces far greater than those of local planning disputes, the speculation seeking authority in the precision of scientific projections (see also Strauss 2015).

Postcards from the migrant

The image of an inundated Westminster is echoed by an image of an inundated Buckingham Palace. Again, familiar street patterns are rendered strange by the mounted encroachment of new forms. This time, it is not water, but 'shanty houses', spilling away from the Mall in the foreground across Green Park and the grounds of the palace. Sample images of 90 Kenyan shanty dwellings were digitally manipulated to create this sea of, the caption claims, 20 million individual houses filling this once green space of west London. The artists make comments about the appropriation of private space for public usage, and point to the contrast with the portion of the palace's grounds still enclosed for the use of a single family.

The slum occupies a prominent place in contemporary imaginations of the urban future. Davis (2006) explicitly aims to re-cast urban futurism away from high-tech fantasies of ever-taller skyscrapers and flying cars (a symbolism traceable to Dada montage) towards the inevitability of ever-expanding informal settlements deprived of basic services and vulnerable to disease, crime and natural hazards. The slum has come to be the tokenistic image of the non-Western city, contrasted to the ideals of rational planning and architectural formalism (Scott 1998). In images like *Buckingham Palace Shanty*, the slum is denotatively and connotatively transported from the cities of the global South to the very heart of Great Britain's centre of power, wealth and privilege. It is a juxtaposition which, like early twentieth century photomontages of urban modernity, seeks to lay bare some of the contradictions and injustices of capitalist social relations. But this juxtaposition also reinforces the connotative functions of these different

modes of habitation. London's past and current status as a centre of migration and cosmopolitan exchange is downplayed in favour of a cruder rendering of encounter between peoples and ways of life – British monarchy meets slum-dwelling migrant.

In *Trafalgar Square Shanty* the artists appropriate the fame and iconicity of Trafalgar Square to further emphasise the potential for transformation in the urban fabric. Images of 'street life in Kenya and covered souks in Morocco' are used to frame Nelson's column, a piece of military remembrance which here recedes into the background. Climate change-induced migrations means that the population of London has swollen such that its open spaces are transformed into new kinds of settlement, radically distinct from that which would be permissible under current legal, political and cultural arrangements. In another image – *The Gherkin* – we are offered a close-up of one of London's most iconic skyscrapers, Sir Norman Foster's 30 St Mary Axe in the heart of the city's financial district. Using images of tenement blocks in Sao Paulo and Hong Kong, the artists recreate the so-called 'Gherkin' as a home to impoverished families improvising accommodation behind the crumbling facade of this former beacon of international finance. Behind the grubby glass hang curtains and drying clothes, 'the signs and minutiae of life' individualising 'the otherwise uniform setting' (Graves and Madoc-Jones 2010). Like the preceding two images, a theme of overpopulation – measured against contemporary, tacit demographics – is woven through this re-designation of urban space.

In *Parliament Square Paddy Fields* the posited entwining of climate and human mobility is further explored, in the context of an image of Parliament Square draped in fog and home to a number of urban farmers cultivating rice, the Palace of Westminster reflected in the pools of muddy water. While the urban-rural contrast visually echoes Magritte's *Opéra de Paris*, this image is inspired by 'an environmental project in East Asia during which Europeans were taught to plant rice'. 'European' arms reach down into the soil, while next to them a troupe of water buffalo toils in the mud. The implication is that the usages of urban space have been radically re-thought in the context of a 'new global economy', while shifting climatic patterns have enabled (or required) agricultural practices to migrate across the globe along with their associated forms of technology and labour (Graves and Madoc-Jones 2010). Transposition and juxtaposition again work in tandem to connote shifts in the spatial cultures of the city and to dramatise the potential for epochal transformations in contemporary urban orders.

The *Postcards from the Future* received a mixed public response. While high-profile endorsements from the likes of Vivienne Westwood, Norman Foster and Radiohead may have enhanced their credibility, other

commentators criticised their representation of complex socio-environmental futures. Climate change communicator George Marshall railed against the *Postcards*, particularly their handling of migration, as ‘dangerous’ fantasy which would only fuel existing prejudices (*The Guardian* 27 October 2010). Echoing Jenkins’ (2007) concerns about photojournalistic portrayals of the aftermath of extreme climatic events reinforcing existing interpretive schemas rather than challenging them, Marshall asks ‘why did the cover story of “climate change” permit the enthusiastic promotion of images and language that would be normally considered unacceptable in a public exhibition?... [Climate change] requires the same intelligence and sensitivity as any exhibition on gender, race or class’. The policy director of the UK Refugee Council called the images ‘lazy and unhelpful’, and they were similarly condemned as ‘cheap stereotypes’, ‘inaccurate’ and ‘insulting’ by other refugee and climate change campaigners.

The *Postcards from the Future* can be understood as part of a broader construction in public and political debate of depoliticised migrants or refugees denied specific subjectivities (see Farbotko 2010; Bettini 2013; Baldwin *et al.* 2014). The very object of a ‘climate refugee’ is a contested one – a form of subjectivity rapidly gaining legitimacy (most notably in recent debates about the European Union’s policies towards refugees fleeing conflict in Syria) while at the same time being challenged by those to whom it is ascribed (McNamara and Gibson 2009; Farbotko and Lazrus 2012; Chaturvedi and Doyle 2015). The climate refugee is a ‘speculative, virtual phenomenon’, coming into being through ‘speculative future-conditional knowledge practices’ (Gemenne and Baldwin 2013, 267). As Bettini (2013) argues, such knowledge practices have depoliticised human mobility, constructed deterministic relations between climate and society, and obscured underlying power relations which shape both the phenomenon of climate change in general and the complex interactions between environment, society and human mobility in particular. Climate refugees have been visually constructed through racialised images of seemingly vulnerable, passively helpless people – often just women and children – stuck in places of climatic excess and positioned rhetorically to call not for direct governmental intervention in the name of human ‘security’, but for new forms of ‘resilience’ whereby vulnerable societies may be made more responsible for their own survival (see also Manzo 2010; Methmann 2014; Baldwin 2016)⁵.

In working with the idea of a ‘postcard’ and its history as a ‘travelling landscape-object’ (della Dora 2009) designed to capture the essence and iconicity of a place, the *Postcards from the Future* creators sought to engage directly with present-day viewers’ own senses of London and its cultural identities. The technique of

photomontage allowed the transposition of particular assemblages of climate and people, with ‘old’ London still very much recognisable beneath the layers of posited transformation. In this sense the images were dialectical in intention, seeking to disrupt visual and symbolic continuums, and combine the seemingly incompatible, to reveal a society poised on an otherwise hidden threshold of change and a cessation of the normal. The politics of the images was to draw attention to this threshold, but in so doing positioned the ‘normal’ as a coherent whole, familiar and comfortable, ‘tensed on the verge of transformation’ (Baldwin 2016, 84). Rather than examining the dialectical and ‘emancipatory possibilities that come with living on the threshold of a dramatically altered world’ (p. 86), the images are culturally and morally conservative, the present forming a bedrock of cultural order and urban stability in advance of a threshold of change, disorder, heterogeneity and alterity.

The tropical and the analogical

Images such as the *Postcards* are global in that they represent the effects of global processes in a future-conditional mode, but also because they do so through globe-spanning representations of social and climatic orders which, through montage techniques, are constructed as distinct, internally consistent, and amenable to speculative juxtaposition and combination in a new symbolic field (cf. Brönnimann 2002). Rancièrè (2009a) suggests that montage frequently switches between dialectical and symbolic poles, and this is true of the *Postcards*. As well a dialectics of global difference, they offer place-based analogical treatments of global processes, heterogeneous elements ‘caught up in the same essential fabric’, the fabric of a changing climate (Rancièrè 2009a, 57). The images offer analogies of a transformed global climate system finding expression in the migration not only of people but of local climatic types – the desert, the tropical, the ice bound. While ruination of recognisable London buildings is absent from the *Postcards* series, the arrival of tropical and sub-tropical climates, along with new forms of human labour and settlement, are presented in stark terms. Climatic difference has long been an animating feature of the geographical imagination. Constructions of the local and the distant are frequently painted in the primary colours of climatic difference, and the ‘contrast between the temperate and the tropical is one of the most enduring themes in the history of global imaginings’ (Driver and Martins 2005, 3). Global climate change, however, has arguably shifted discourses of tropicity from themes of colonial encounter to speculations about tropical invasion (Blaut 1993; Arnold 1996; Boia 2005; Baldwin 2012). Where once explorers and colonists ventured forth equipped with a geographical imagination of ‘tropical-nastiness’, disease,

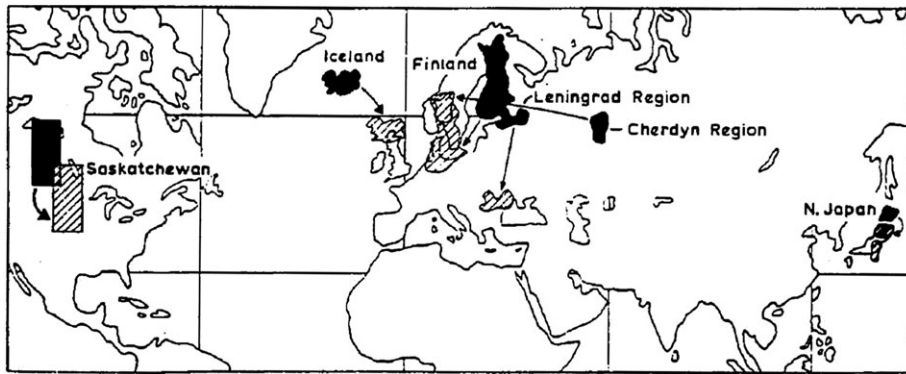


Figure 8 Mapping mobile climates: 'Present-day regional analogues' of the Goddard Institute for Space Studies doubled-CO₂ simulation

Source: Parry and Carter (1989, 112). Reproduced with kind permission from the International Institute for Applied Systems Analysis (IIASA)

disorder, scarcity and/or abundance (Blaut 1993, 70), informed by a regional logic of distinct climatic zones and associated forms of human life (Heymann 2010), now the geographical imagination is imbued with mobile climates, with social psychologists urging the use of 'experiential' geographical analogies for the future climates of specific places (e.g. Shome and Marx 2009).

Such analogical strategies include claims that the future UK climate will resemble that of present day, distant places (such as the wine-growing regions of France or the Mediterranean), which have long populated media coverage of scientific projections. During the 1980s and 1990s 'spatial analogue' techniques of statistically comparing spatially distinct climates in order to generate scenarios of how one climate may evolve into the future slowly gave way to numerical simulation of climate change (Henderson-Sellers 1993; see also Russill 2016), although analogue techniques continued to be used to compare the results of simulation experiments with present-day climates (see Figure 8). Despite its drawbacks, including 'the frequent lack of correspondence between other non-climatic features of two regions that may be important for a given impact' (Parry and Carter 1998, 83), the spatial analogue has remained a popular epistemic and communicative strategy. Research into the economic costs of urban adaptation has used analogue techniques, utilising observed and projected temperature and precipitation information to identify a city (e.g. Córdoba) in which another city (e.g. Paris) can see its possible climatic future (Hallegatte *et al.* 2007). The UK's Climate Change Impacts Review Group noted cautiously in 1996 that a projected temperature change by the 2020s would be 'equivalent to about a 200 km northward shift of UK climate', the climate of Oxford moving to Manchester (CCIRG 1996, iii). However, newspaper coverage

spoke of London enjoying 'the same weather as Paris and the Loire Valley', with the Environment Secretary John Gummer arguing that while this 'may seem attractive ... this shift also has disadvantages' (quoted in Nuttall 1996, and elsewhere). Later analogical scenarios became more long distance, the Mediterranean emerging as a possible British future (e.g. BBC 2005; Jacob 2009).

Spatial analogues illustrate the new, 'banal cosmopolitanism' of the weather as local conceptions of stable climates have given way to new global imaginations of spatial and temporal flux (Hulme 2010), with pictorial (and cognitive) montage a key strategy of visualising this new geographical climatology (e.g. Graves and Madoc-Jones' *Camel Guards Parade* and *Parliament Square Paddy Fields*). But, as with older colonial discourses of tropicality, typification is more common here than generalisation, and 'very particular views and visions, represented, for example, by iconic images of tropical forest or desert island scenes, stand in for tropical landscapes as a whole' (see also Brönnimann 2002; Driver and Martins 2005, 16)⁶. This 'standing in' is particularly apparent in both symbolic and dialectical forms of photomontage, where visual objects are things first and symbols second (Berger 2013, 25); camels, rice fields and shanties in the *Postcards* occupying 'an ambiguous time between present and future, and an ambiguous space between order and disorder' (Baldwin 2013, 1474). The typifying function by which social and climatic difference is represented in the *Postcards* is deeply problematic, offering only a simplistic, racialised politics of place (Baldwin 2016), as opposed to a fuller politics of human mobility, urbanisation and the global interconnections through which human populations are jointly engaged in the ongoing composition of a common, climate-changed world (Latour 2010; Hulme 2010).

Conclusion: photomontage, climate change and the politics of juxtaposition

Historically, the central strategy of photomontage has been 'subversive ambiguity' (Ades 1986, 159). A compositional process defined by juxtaposition, contrast and scalar disruption, montage thrives on connotative ambiguity and the capacity to subvert 'natural continuities' and their 'ideological covering or disguise' (Berger 2013, 25–6). But, going beyond critique, to what extent does photomontage possess the aptitude for making 'generative and integrative proposals for a warming world' (Gabrys and Yusoff 2012, 14)? Creative practices of future-conditional knowledge-making are inherently political negotiations of sameness and difference, and unavoidably draw on dominant imaginaries of socio-technical and environmental futures (Jasanoff and Kim 2015). Montage images of flood and ruin have been used to raise awareness and concern about climate change, but we should be wary of ruins' history as objects of lust (Dillon 2014), pleasure (Macaulay 1984), fatalism (Jackson 2015) and perhaps even addiction (Miles 2014, 77), and thus of their limited capacity to inspire action to prevent ruination when they themselves can stand for cultural endurance as much as for vulnerability. Likewise, we should be critically attentive to similarly conservative renderings of climate migration and refugees, which trade on equally imperial themes of lost or threatened order (Methmann 2014; Reid 2014; Baldwin 2016). One image from the *Postcards from the Future* series – now absent from the project website – of monkeys on the balustrade of St Paul's Cathedral was captioned 'a new breed of tropical immigrants reminiscing about equatorial days'. This metropolitan revival of colonial discourses of tropicality and biogeographical otherness sits uneasily with the political radicalism which is the inheritance of past montage practices. Montage depictions of climate change have borrowed most heavily from surrealist forms, where spatial continuity is prioritised in the service of emphasising strangeness and the uncanny. But as a broader suite of techniques, photomontage has a more radical potential – embedded both in its history of political subversion and dialectical critique, and in its epistemological critique of pictorial representation – which is manifest for example in the work of Matha Rosler; work which, like many climate montages, trades on questions of home, distance and defamiliarisation⁷; and more recently in the work of artists such as Peter Kennard, Geoff Broadway and Sean Hillen (see also Dillon 2004; Hawkins 2014; Vasudevan 2015). Through the acts of cutting and pasting, isolating and combining, 'that which is given is given through an assemblage of views, an assemblage whose cuts ensure that what is given remains open' (Doel and Clarke 2007, 902). There is a reflexivity about montage – an openness towards, and a reflection upon, the choices and

considerations which go into the production of an image. Montage is thought made visual, representation as event.⁸

There is, therefore, a potential in montage for making clearer the choices that are made in speculative future-conditional knowledge practices. This kind of reflexivity is increasingly being demanded of climate change knowledge-making, as crises of trust and democratic participation motivate new strategies of knowledge 'co-production' and an openness about how prior assumptions, cognitive processes and epistemic uncertainties influence the outputs of knowledge-making exercises (e.g. Lövbrand *et al.* 2015). In the context of participatory scenario production, for example, there may be scope for photomontage to act as a means of engaging wider publics in exploring different pathways and outcomes of social and environmental change (Al-Kodmany 1999; Lewis 2012), in a fashion which repoliticises the choices and assumptions which have been increasingly obscured as either objects of managerial control or as socio-technical inevitability (Swyngedouw 2010; Rickards *et al.* 2014). Photomontage, then, as a technique of assembling diverse 'views', could play a useful role in the ongoing 'making, imagining, contesting, and living of shared material and affective worlds' (Gabrys and Yusoff 2012, 19), as a means of both 'bounding and opening up the future' (Rickards *et al.* 2014, 598)⁹.

This essay has identified photomontage as a novel genre of global environmental image-making. Photomontage techniques have been used to illustrate the speculative effects of global climate change on recognisable places, often through representational strategies which play on the global interconnections precipitated by climate change. Global environmental change troubles conventional geopolitical categories of nation, identity and territory, introducing powerful new elemental and political globalisms (Dalby 2007). The photomontages discussed engage with these interconnections, whether in the form of rising seas, shifting climatic zones or displaced people. But it has been argued that, in so doing, images like the *Postcards from the Future* rely too heavily on strategies of typification and juxtaposition which depoliticise the complex global geographies of environmental change. Global environmental images must always obscure as much as they reveal, and their silences should be sites of careful critique. Photomontage, however, also offers a means of redressing some of those silences by making plain the choices which underpin representation – the very function of montage is the representation of such choices. As such, photomontage may prove to be a particularly powerful form of global environmental image-making and an agent of new, progressive geographical imaginations, conducive to exploring spatial ambiguities, while rendering its own strategies of inclusion and exclusion a function of representation itself.

Notes

- 1 It is worth troubling this oft-repeated equation of visibility and political will. On the complicated history of the governance of visible atmospheric pollution, see Whitehead (2011) and Corton (2015).
- 2 This essay draws upon a survey of climatic montages performed by the author which, although extensive, cannot be considered comprehensive. It nonetheless encompasses a number of high-profile exhibitions, publications and publicity campaigns from the last decade. Images were selected which operate in a future-conditional mode, offering speculative scenarios of the local effects of global changes. Also included in the corpus were older (pre-‘climate change’) images which perform a similar function of speculative local transformation. The broader corpus of images, including those discussed in this article, can be found at <https://uk.pinterest.com/mwfmahony/future-conditional/>. Those reproduced in this article are the highest resolution versions found in the historical record.
- 3 The prominence of both artists and designers as producers of climatic montages reflects an earlier entwining of the two fields in the development and application of montage aesthetics, most notably in Russian Constructivism.
- 4 See www.london-futures.com/
- 5 This echoes a broader shift in the discursive construction of the refugee from the heroic individual fleeing political persecution to the helpless masses of victims of circumstances unconnected to their own political subjectivities (Johnson 2011).
- 6 On colonial legacies in the economy of attention afforded to different places in climate discourse, see Orlove *et al.* (2014).
- 7 Thanks to the reviewer who pointed out this connection.
- 8 This auto-reflexivity can be usefully compared with the representation in early cosmograms of the artist themselves, placing the act of representation within a broader natural and divine order. See Tresch (2015).
- 9 Photomontage also possesses potential for opening up place-based memories of climatic pasts – see Hall and Endfield (2016).

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